

CLAIMS

What Is Claimed Is:

- 1 1. A light fixture comprising:
 - 2 a plurality of lights mounted on a perimeter structure, the structure
 - 3 supporting a light deflection cap that deflects light from the lights into a light
 - 4 mixing chamber; where the structure and cap surround the light mixing
 - 5 chamber; and,
- 6 where at least one side of the light mixing chamber is covered by a lens.
- 1 2. The light fixture of Claim 1 where the plurality of lights are light
- 2 emitting diodes.
- 1 3. The light fixture of Claim 1 where the perimeter structure has an
- 2 interior diameter greater than an interior diameter of the light deflection cap.
- 1 4. The light fixture of Claim 1 where the lens and the light mixing
- 2 chamber blend light from the plurality of lights into a single light source.
- 1 5. The light fixture of Claim 4 where the lens has a perimeter edge
- 2 and the single light source casts light to the perimeter edge of the lens.
- 1 6. A soft light fixture comprising a plurality of light emitting diodes
- 2 mounted on a perimeter structure supporting a light deflection cap around a
- 3 light mixing chamber, where an interior diameter of the perimeter structure is
- 4 greater than an interior diameter of the light deflection cap; and,
- 5 a lens covering at least one side of the light mixing chamber whereby the
- 6 lens, the light deflection cap, and the light mixing chamber blend light from the
- 7 plurality of light emitting diodes into a single light source.
- 1 7. The soft light fixture of Claim 5 where the perimeter structure is a
- 2 ring.

1 8. The soft light fixture of Claim 5 where the lens is translucent.

1 9. The soft light fixture of Claim 5 where the plurality of light
2 emitting diodes comprise diodes of at least two different colors.

1 10. The soft light fixture of Claim 8 where the mixing chamber, light
2 deflection cap and lens blend the light from diodes of at least two different
3 colors into a single light source of a third color.

1 11. The soft light fixture of Claim 5 where at least one side of the
2 lens is convex.

1 12. A soft light fixture comprising:
2 a light mixing chamber defined by a perimeter ring supporting a light
3 deflection cap and a lens;

4 where the perimeter ring and light deflection cap further define a
5 plurality of light ports containing a light emitting diode in each light port aimed
6 to cast light into the light mixing chamber;

7 each light emitting diode is mounted to a flexible printed circuit board
8 ring; and,

9 where the lens covers at least one side of the light mixing chamber
10 whereby the lens, the light deflection cap, and the light mixing chamber blend
11 light from the plurality of light emitting diodes into a single light source.

1 13. The soft light fixture of Claim 11 where the light deflection cap
2 further comprises an interior diameter less than a diameter of the perimeter
3 ring.

1 14. The soft light fixture of Claim 12 where the interior diameter of
2 the light deflection cap forms at most a 135-degree angle with a top diameter of
3 the light deflection cap.

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1 15. The soft light fixture of Claim 13 where the perimeter wing, light
2 deflection cap and the lens are made from white polycarbonate plastic.

1 16. The soft light fixture of Claim 12 where the plurality of light
2 emitting diodes comprise diodes of at least two different colors and where the
3 mixing chamber, light deflection cap and lens blend the light from the diodes
4 into a single light source of a third color.

1 17. A method for creating a soft light fixture that casts a
2 predetermined color of light comprising the following steps:

3 choosing a color of light to be cast from the light fixture;
4 mounting a combination of light emitting diodes on a printed circuit
5 board ring to generate the color of light; and,

6 seating the combination of light emitting diodes in a plurality of light
7 ports of a light fixture having a perimeter ring, a deflection cap and a lens.